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ABSTRACT

This document presents the keynote address of the final conference of the Management Information System Program of the Institute for Services to Education, held in Washington, D.C., February 21-22, 1974. The address, the educational enterprise and managing priorities to meet community needs, capsulized the contemporary strategies being applied by the institution in structuring a management system to respond to community needs. The address, together with the question and answer session is presented in this monograph. Conference proceedings are presented in HE 005 641. (HJM)

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MIS In-Service Session on

THE DYNAMICS OF SMALL COLLEGE MANAGEMENT

Volume I

The Educational Enterprise and Managing Priorities to Meet Community Needs

by

Cleveland L. Dennard

February 1974

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INTRODUCTION

Keynoting the final conference of the Management Information System Program of the Institute for Services to Education was Dr. Cleveland L. Dennard, President of the Washington Technical Institute in Washington, D.C. The conference focussed on the various aspects of management system applications to college and university environments. Dr. Dennard's address, which concluded the day-and-a-half conference, capsulized very effectively the contemporary strategies being applied by his institution in structuring a management system to respond to community needs.

The address, together with the question and answer session which followed, is presented in this monograph. The decision to publish this message separately from the conference proceedings is due to its obvious applicability to educational institutions outside of the MIS/TACTICS program structure.

Editing the transcribed address of Dr. Dennard was a very simple task of presentation. The analogies which were used in the address, while somewhat simplistic, did not insult the program audience of senior educational managers and academic officers because of the manner in which they were presented. For example, he greeted the audience with the statement, "Good morning, fellow students," and in a later part of his message he applied the analogy of a ninth grade general science experiment in the exploration of magnetic fields to audience understanding of the concept of his management model, a tactic which might have offended some members of the audience. Once, however, these over-simplified approaches were put into the context of contemporary management solutions developed by professional managers, the "sting" of their simplicity was reduced to a common-sense, logical explanation of the operation and management of an educational environment.

We are confident that the reader of this monograph will have an understanding and appreciation for the approach which one institution has taken in responding to the hue and cry of "accountability" and "cost effectiveness" of the higher education community.

James A. Welch

THE EDUCATIONAL ENTERPRISE AND MANAGING PRIORITIES TO MEET COMMUNITY NEEDS
BY
CLEVELAND L. DENNARD

MR. WELCH: It's always a pleasure to introduce a person who has accomplished so much. Though it's a pleasure, it's not easy! Dr. Dennard has done so much, so well, and in such a short time, that if I merely mentioned half of his accomplishments one would find it difficult to believe. As you may read in the program, his formal education, I need not reiterate, but to bring more clarity to those things listed as his work experience yields quite a bit of insight into the man. Each of his roles has required tremendous leadership ability, but most important and relevant to this conference, a keen sense of organization, scheduling, and the precise mobilization of tremendous pools of manpower has also been required of this man. It's small wonder that when Washington, D.C. decided to establish a technical institute in this complex city, the Nation's Capital, President Lyndon B. Johnson sought out and appointed Dr. Dennard to head this new institute.

Through his application of knowledge, zeal and what one could only describe as courage, he accepted and undertook a job which indeed few people would have tried: To start a new school, a technical institute at the post-secondary level, in the Nation's Capital. As we said in the printed program, his message this morning deals with the Organization, Establishment, and Application of the Institution in the Community which it Serves. Washington is indeed a diverse community. Some of these pearls of wisdom, I think, hit at some of the very points and issues that we have discussed during this conference, and I think to bring this conference to a logical conclusion, Dr. Dennard's address this morning should be thought-provoking.

DR. DENNARD: Thank you very kindly, Mr. Welch.

Good morning, fellow students. I say fellow students because those of us in the educational sphere are constantly in the process of learning new approaches to the solution to old problems, and I would like to be as brief as possible and share with you some notions concerning an approach to managing the educational enterprise. Whether you're engaged in the academic program experience or the research and development experience, or the managing of the resources of people, money

and time, or whether you're engaged in the managing of the student personnel services, it appears to me that there is a frame of reference out of which academic decisionmaking takes place, that provides for a higher degree of predictability on one hand, and consistency of institutional behavior on the other.

It seems that there are several things that you really have to have a handle on to get a clear picture of a theoretical model of an educational institution. The first is the framework of policies that leads to a clear delineation of your program objectives from which clear statements of planned program activities, based on well understood definitions, are translated and coded for operations. The process for reporting monthly the kind of activities that you have been able to carry out and the management reporting system that is based on your operating procedures that permit you finally to evaluate the effectiveness with which you have done what you said you were going to do is the concept of my very elementary management model.

Now, to me this is very simplistic. The wellspring of understanding about this concept is something that normally begins about the ninth grade for most people here in the West. It's often in a course called general science, and it's usually dramatized in the science laboratory experience using iron filings placed on a piece of paper with a magnet underneath to describe a phenomenon. Based on that, the student is usually asked to write up the experiment. You say you have followed a method in writing up the experiment, and that method is called the scientific method.

Then you go through college and on to graduate school and people begin to tell you that one of the things which is required to graduate is to write a thesis and you have to write the thesis precisely the way you wrote the ninth grade experiment. Consequently, the outcome of this series of experiences is the acquisition of techniques and intellectual skills. Aristotle described it as rational thought. And it is the presence of this thought process or intellectual capability that forms the wellspring of our ability to manage in an educational enterprise. It is not new. It really has nothing to do with the people on the payroll in terms of their feelings and the like. It is an educator's capacity to trust the tools that he or she allegedly believes will work. In their analysis that takes place with respect to dissertation writing, or performing an experiment in the ninth grade, one tends to say that the problem has to be defined, and the experiment has to have limitations, or maybe the word is delimitations. Once the problem has been defined and limited in scope, "the computer types" call it delimited,

one sets in place the parameters. I'm not sure that mathematicians are together on the computer scientists giving a different definition to parametric structures as the computer scientists are, but at bottom it simply means to give limitations to something that has been probable, is now definite, and requires structured procedures.

But, the procedure has to be based on a hypothesis of what the outcomes are going to be, and the outcomes must be stated in terms that one can measure, in terms of what has to be done, when it has to be done, how it has to be done and you will recognize whether or not it has been done.

And based on the hypothesis, you can say that it's a no-no, or you can say, it is a valid hypothesis, or it's a hunch, but if you carry it through the scientific process, you could arrive at a conclusion that is consistent with what you thought it was going to be before you started.

Now, if that is valid, as to a term of reference, or how one applies his or her intellectual skill in the managing of an educational experience, then we have common ground for the remainder of our discussion. Are we together thus far?

It never ceases to amaze me of how frequently educators somehow tend to reject the very intellectual skill that is their justification for being when it comes to managing. I don't know the answer to this condition. I don't know whether this is because of the lack of quantative demand for outcomes that exists in the Ph.D work environment, or whether it's because a Ph.D really is an expert in the application of Aristotelian kinds of notions and is capable of developing intellectual models, from which he or she works. Since the model can be dealth with arithmetically in the algebraic sense, you can constantly substitute literal values for numeric values in developing a model or a profile of the institution in which you work. Without such an approach, you can never see the institution in the management sense, but rather see only the people issues which are guaranteed to deny the student of the benefit of the aggregate intellectual experience of the group.

Upon accepting the challenging assignment of working with a Board of Trustees to create a new college from scratch, I sought to talk with a group of people who had been identified as the up-and-coming middle academic managers who, if given an opportunity, could step into new assignments and take care of business. So i sat down with the group one day and proposed to them that if we, with the backing of the United

States Government, could accept employment and work together as a matrix management task force for four to six months, and conceptualize in educational terms, the process, procedures and product of a new higher education institution, that by the end of the six-month period we would be in a position to structure an administrative organization to carry out the program objectives. Before we started, whatever we needed in money would be made available; we agreed, that we wouldn't give ourselves titles until after an organizational structure was clearly developed, functions and job descriptions outlined, etc. and that whichever individual of the group emerged as the dean of faculty or administration would not be important until the task was defined.

I want you to take a guess as to how many of those persons left their jobs and came with us. Well, this was a mind-boggling experience. Most people want to be creative, innovative, in favor of opportunity for options, want the ceiling lifted off their career aspirations; yet when an opportunity presents itself, rarely does the individual with the skills take advantage. In our case, not one responded.

This absence of a response raised some real concerns about this matter of how one might approach the process of managing in higher education. Were I to generalize, I would state that we do not believe in the scientific approach as a tool. The heart of the management process is the application of rational behavior. I don't mean that it has to be geared to formal syllogistic logic, it just has to be consistent in the application of common sense. This is especially true when you are required to provide staff development while carrying on institutional development.

Our experience went something like this: In order to define societal needs for our purposes, we concluded that a definitive statement of the problem of what people do in the community for work and leisure was essential as a frame of reference. Such a statement presupposed that an analysis would include a demographic analysis of the economy and personal income. Inherent in the analysis, of course, was a series of assumptions about the behavior of the people as in the context of what was done for making a living as well as making a life. In simplistic terms, we assumed that if a person reached age 21 and proposed to work for 50 years, that actually he would spend 16 1/3 years on the job, 16 1/3 years asleep, and 16 1/3 years getting ready to go to work and getting ready to go back home. If in a 14-hour day one works 8 hours a day, sleeps 8 hours a day, and spends the other 8 hours getting ready to do one or the other, and facing the fact that employment is the dormant factor or the dominant factor in the affairs of all human beings, to ex-

amine societal needs it must be in the context of what people do for a living.

We determined that there were certain occupations within sectors of the economy that grew faster than the growth rate of the population; some grew as fast as, and some occupations grew slower than the growth rate of the population as a whole. Agreeing that if we had to develop an institution to serve these ends, criteria would be required to establish the need for buildings geared to those curricula areas that would be in demand for quite awhile in relation to those curricula areas that would tend to be of short duration and disappear. Consequently, we selected only those occupational areas that were growing faster than the growth rate of the population, and those that were growing as fast as, and omitted all of those employment opportunities that were growing slower than the population growth rate for the purposes of facilitis and for the purpose of curricula development.

Then we wanted to know what were these occupations in economic terms. We found, for example, in the District of Columbia, that 3.1 percent of all of the people employed in this Standard Metropolitan Statistical Area (SMSA) were employed in aviation and 37 percent of all of the people employed in the five county metropolitan area were employed in areas requiring competences in engineering disciplines. We identified the curriculum based on that kink of analysis, but then restricted the curriculum enrollment projections by major to the same percent distributions that we found in the SMSA analysis which was validated over a sixty-year period with a .9 variance. When the model was viewed in the context of the total nation from the census analysis to find only a minus 2 percent variance, we began to ask ourselves what does one do and what should one know to be a civil engineer, if civil engineers build roads, highways and bridges. And since 21 percent of the people employed in the area are, in fact, employed in either building roads, surveying, mapmaking, etc. what really are the intellectual experiences involved in the process?

How are these experiences translated into units of instruction, into courses and into credit-hour majors? This question we considered to be the heart of the faculty requirement and academic instructional program.

Having examined the curricula issue with basic resolutions, objectives could then be pretty clearly stated. If the objective is to provide educational experiences requiring demonstrated scholarship in "X" number

of disciplines over an academic term, what criteria would be used to determine that scholarship had been demonstrated? Having identified the curriculum emphasis phases in societal need terms, it became important to assess who needs the graduate, and how many would be needed, assuming that the graduate would require no further formal education. The answers to these kinds of questions become the kind of data that had to be gathered for an institutional management information system. As you can see this does not represent a computerized or management information system group definition of what you ought to be doing; rather, it is a translation of our own program goals and program objectives in language that can ultimately permit us to find out whether or not we did what we said we were going to do—outcomes versus plans.

So to proceed in that manner, clear statements of what should be done led sequentially to the question of who should be served? Moreover, looking at the digest of educational statistics for the United States, where you would find nearly eight million students enrolled in higher education, and if you examine it by geographic areas or by states, you will find that 3.4 percent of all of the people in the United States are provided higher educational opportunities in the public sector alone. And another 1.6 percent are provided educational opportunities in the private sector, which means that nearly 5 percent of the population of the United States is provided higher educational opportunities through whatever schemes exist. And if the Institute represented only one of three such public institutions in the political subdivision known as the District of Columbia, then we would plan for at least 1 percent of that. We concluded that if there were 570,000 people in the District of Columbia, then the higher education population of the Institute should have provisions made for at least 1 percent or eight thousand FTE (Full-Time Equivalent).

Beginning with an eight thousand figure, we went through the exercise for budgeting purposes of determining whether the enrollment would mean head count or FTE, and if FTE, would it mean full-time teaching equivalent or full-time credit hours, two different elements. Such was the approach to model construction based on the variables. Having highlighted the student enrollment factor as the central element of our program design, we then had a basis for the development of a budget in the most finite of detail that would reflect itself in the application of our procedures and processes while holding the one FTE element constant. Having created a conceptual model, it was possible to describe a narrative of the model as a basis for a plan of work. What shall be done?

The honesty of this exercise permitted us to design a plan to which everyone could commit himself or herself. The development of a program plan required that we divide the calendar year into 261 working days and write out for every day what each academic administrative unit was going to do. We further determined the cost for carrying out each activity by personnel, materials, equipment and supplies to formulate a program budget. Careful examination of the task to be performed was geared to the 261 days enabling the staff to fix points in time when the funds would require expending. The formalizing of these data was recorded in a program fiscal management plan. Organizing the information at both the detail and summary levels for a Management Reporting System made it possible for each academic administrative unit to see the extent to which actual achievement of tasks had been accomplished against the planned allocations of program activities, people, money and materials.

The reasoning behind our approach was simply that we understood that a logical, rational or scientific method was an appropriate way to proceed. Such an approach applies whether you are engaged in accreditation study or anything else. You state your objectives, state your methodology, state how well you carried out the objectives by writing up what you did, and show the evidence. Implementing this kind of approach, we were able to develop certain kinds of documents and assumptions and understandings that formed the basis of our day-to-day operation.

The program structures, of course, were the most difficult to deal with, and they're difficult because someone has to make decisions. By a program structure, I mean defining the various elements of program activities. One is the budget structure, two is an accounting structure and three is the program and the administrative organizational structure. We say that in higher education there are three things that are normally done that are primary to our objectives: teaching, research and extension. Whether you're in a public college or private college, we tend to say that we are engaged in teaching, scholarship and public service (extension).

Now, if each of the written program documents cited above places us in the same position as the airline, confidence limits in the non-statistical sense should be greatly raised for the entire faculty and staff. We desire

that our management information system provides the same level of confidence that Delta or Eastern Airlines MIS provides. Would you want to ride an airplane in which you did not have the confidence that someone knew how many seats were on the plane, how many miniatures were on the plane, how many meals were on the plane, how many stewardesses were required, how many pilots and co-pilots were required in order for you to pick up a telephone and make a reservation and that someone could reserve a seat because they knew how many were there? If by chance you flew on the plane from one location to the other and it just dawned on you, how does one know whether or not all the people who rode the plane had tickets? Surely, there must be an accounting system somewhere based on the program objectives, based on the flight schedules that have been set up, based on the dispatching process, in the same manner that we have in the management information system. If it doesn't work the same way, no one will ever know what is going on in the environment, or, if they know, they will always be two weeks to two months to two years after the fact confirming the data.

All that I'm saying is this: That in the academic management environment, you really have to delineate in detail the objective and translate the objectives into operational language of what you're going to do before you begin. So that once you begin, you can always match what you have done against what you outlined as the plan of work.

Now, the reasonable argument against such an approach is very easy to understand. Faculty tends to say, look, we are here. If the student is worth his salt and he comes to my class, I will teach him; but, of course, you understand that you can take a horse to the water but you can't make him drink. So why should I have to delineate functions, aren't you questioning my competence? The validity of my Ph.D.? The answer is categorically no. Anymore so than one would question an airline. Would you buy a TWA ticket on that basis? Is there really a fundamental difference? Companies go bankrupt and you know they go bankrupt. The airplanes fall and you know they fall, but would you make a commitment to a company to ride its airplane if you thought is was going to take the same kind of an approach to its operation as we sometimes take in the academic experience? Would you?

Is it really responsible to say that of the number of students that graduated from our institution, X percent are now doctors, lawyers, etc. and never mention those who enrolled and never graduated? Or

those who graduated and never become doctors, lawyers, etc.? This is the kind of question we had to ask ourselves in order to design a new college from scratch, in order to get an on-line operation going early enough in the planning for execution. The process simply means that now you can look at your results, your outcome, in quantifiable terms without losing sight of the humanistic social purpose of education. To improve the capacity of a human being to make choices, and to insure that in the process of problem definition he or she can define problems in such a way that they are able to see the consequences of their behavior before they behave, they can make alternative judgments between which consequence they want because it is in their best interests. This I perceive as choice making, the single intellectual product of the higher education experience. If this process, which is an element of the aggregate student learning experience, cannot be used as the applicable management process, then there is something totally inconsistant with the way we organize and implement an educational enterprise.

I think it's a very sound principle to use the same rational methods that we espouse in the teaching–learning process as the basis for how we behave in academic management. I want to assure you that the process works. And it doesn't matter whether you're administering the affairs of eight million people or eight hundred. Thank you. (Applause)

MR. WELCH: I have a question regarding the framework of the policies which delineate program objectives. The reporting system at WTI, the reporting from the curriculum side of the house, what does that involve in terms of procedures for division or department heads?

DR. DENNARD: I refer to those as program structures that permit us, first of all, to see the distribution of our curriculum based on the educational outcomes that have been predetermined in the context of the kinds of opportunities that exist in the society or in the community. If we hypothesized that in the five-county, metropolitan D.C. area that there would be 28,000 jobs at the close of a given academic year, either created as new jobs due to industrial expansion, or turnover because of attrition due to retirement, or mobility of the population, and our assumptions are valid, then we can conclude that a societal need exists in concrete terms. You are aware of the fact a national average of roughly 5 percent of all jobs in the United States turn over annually.

If you took a very conservative estimate of 50 percent of that, just 2½ percent would turn over; in fact, the opportunities would be there and we could then determine from the dictionary of occupational titles, along with a survey of the community, what educational levels are required for each occupational area. If, for example, registered nurses are identified in any community as a demand area and we confirm the fact that the license requirements for becoming a registered nurse do not include a baccalaureate degree, rather, an associate degree plus a state board examination, then the objective is set for an associate degree. Similarly, the licensing requirements to become a certified public accountant in 17 states, including the District of Columbia, do not include a baccalaureate degree, rather, 60 credit hours of college accounting plus three years of apprenticeship with an accounting firm prior to sitting for the examination.

So, if in your analysis of the societal needs, you construct your programs so that you know what the market is, then you have a different kind of statement of objectives to match your primary program against. If these kinds of questions cannot be answered, you have a real problem: What is the purpose of the instructional program? What are you trying to produce, a baccalaureate or graduate degree? To provide research? Purpose? Who is going to pay for it? Why is it worth that amount of money? What are your costs? So, we tend to "matrixize" or take the skeleton of the body, and that's what I would use as the term rather than profile of an institution, and then distribute against each academic major: faculty, space, dollars, students, etc. Moreover, if, at the end of the year, the aerospace faculty has 5 percent of the dollars because it has more professors than assistant professors, and only has 3½ percent of the students, because somebody is busy in research or something and doesn't have time to teach, and only produces 1 percent of the graduates, then, you know, as a taxpayer or as a businessman, that's kind of hard to deal with; 5 percent of the faculty, 3½ percent of the students, and 1 percent of the graduates. When your management information system generates reports, you can see what you are really doing, which provides the basis for the academic agenda.

So, you really aren't engaged in the exercises of Carl Rogers versus Burris Skinner debates. All we're talking about is based on the societal needs of this community, which have been translated into a theoretical model, which people in a humanistic sense can deal with, but the evidence of which does not show that the person on a day-to-day basis contributes to the objectives that the trustees have established for the

institution. If either he or she does, or we agree to disagree, it is not personal. It is back to the level of stated objectives: is there demonstrated scholarship on the part of your students? How do we find out? We get a grade report out of the computer. What percent of your students failed? Passed? With honors? Without honors? Why? They were brought to the water but they would not drink. Did the counsellors know that? Did you tell anybody? With whom do you communicate? How do you communicate? Here is the record. (You mean we have to ride from here to California and there are no miniatures on the plane? Didn't you know we were going?)

At what point in time does the analysis take into account the elements involved in achieving the goals. And if 72 percent of all of your dollars go into salaries, what do you expect the personnel to do? Is that a faculty senate issue or is that an administrative duty to work with the faculty for them to spell it out. Obviously, it is possible to delineate.

I don't believe that an institution has to go bankrupt if it owns houses and the faculty and the staff uses them and the husband and the wife are on the payroll, or the wife and daughter are on the payroll, unless nobody is willing to put in black and white what it costs to own the property, what it costs to maintain it, in relation to the remainder of the college facilities. It requires no scholarship, but if the egos are more important than the objectives, if analysis, which is an element of the scientific process, is not open for the purposes of examination, then people are not really being serious about education as an enterprise. Because if it is not an enterprise, just cut five tenured positions and you will find out where all the dedication is. You'll be in court. Even if you don't have the money.

So the program structure of the primary objectives of the institution, versus the secondary objectives, when structured into a reporting format, places the academic administration in a position to make realtime program judgments in time to make a difference in outcomes.

Now, whether or not they have the intestinal fortitude to say, that logically if *a* equals *a prime* and *b* equals *b prime*, it is reasonable to assume that *c* should equal *c prime*, but somehow the syllogism breaks down due to the absence of leadership. So the easiest way to handle a problem is just raise the tuition for the students, hold the faculties in check for the faculty, hold the salaries in check for the faculty, and

check for the faculty, hold the salaries in check for the faculty, and solve the problem in an illogical, irrational and inhuman manner for the students.

So the reporting system simply permits you to see what you are doing in relation to what you said you were going to do. And I was very careful not to use the terms, the systems approach, which is a coined term for the scientific method, or management by objectives, which is a coined label for the scientific method which conjures up different kinds of meanings for different people. But I do think it's essential to administrative decisionmaking. There are no decisions that we ever have to make at the Institute that have to do with anything other than what is the difference between what we said we were going to do and what we have done. And no one has been fired at WTI in the six years that we have been in operation.

MR. LONDEEN: I wanted to say how much I appreciated the comments that you made, not only for the approach, but also for many of the specific technologies that you eluded to in your address. I'm from a predominantly liberal arts institution, and there might be some problems of translations, let's say, to put it mildly, between what you were talking about and an ongoing liberal arts institution. One thing I'd like to know is, do you measure the efficiency of WTI by the kinds of placement and what happens to your student immediately upon leaving certain programs and if academic output and the placement of students is a measure, I'd like to know what kind of tracking system you have?

Also, what happens to the mobility of the student, three, four, five years after they're on the job. My reason for raising this question is I think a lot of liberal arts institutions say that by remaining liberal arts, they maintain certain options for the student so that they have career choices. Of course, many liberal arts institutions don't place all their students in professional programs. So I was just wondering how you address some of those issues.

DR. DENNARD: It is a difficult process to identify the near-term objectives of a baccalaureate experience in the liberal arts, since historically liberal arts undergraduate experience is really the background for professional study, first, and secondly, has been a background for liberalized social behavior.

We have some occupational areas that to me are dependent on the arts, the word liberal arts is throwing me a curve, but liberal and fine arts. There are many occupational relationships that have not been seriously examined in curricula terms by colleges. The whole of the communications field, which is dependent on the language, and the whole of the civics or the political field, is dependent on the ability of a student, or the capacity of a student to recognize relationships in society that lead them into the political process.

For many students, they have never seen the relationship between the curriculum and the opportunity. And I would assume that a student graduating in government, with a major in government, a major in history a major in political science, a major in English, a major in mathematics, if it is per chance in the liberal arts college, and if the institution looked at the outcomes and looked at the society in terms of what could the individual do upon graduation without further study, curricula revision might very well reflect an increased amount of concentration on the utility of knowledge without sacrificing the accumulation.

Unfortunately, that isn't done, and at the Institute, we look at public administration, business administration or business management as part of the behavioral sciences in which techniques for accounting, techniques for planning, organizing, budgeting, evaluating, directing and controlling a governmental agency is a by-product of the liberal experience. In this community, for example, 24 percent of the District's budget goes into the Human Resources Administration. In New York City, 28 percent was going into human resources. Social and Health professional workers who work with welfare recipients and the like, need to be able to see what is normal in the society or to see what is normal in the environment, and to determine how to apply knowledge to the solution of problems. This becomes a very important part of shaping the attitudes and outcomes of institutions.

At Washington Tech, we have designed the institution for the results that we anticipate. And our placement rate has not dropped below 84 percent in a single year since the first class graduated. But that doesn't tell the whole story, nor does it tell how we do this. And the real story is in how we manage what is to be offered.

In our earlier discussion, you recall that we built a theoretical model which almost automatically excludes a faculty member from impulsively

coming up with a bright idea of how we ought to have a major in x, y, or z. Based upon a survey of the offerings of 36 colleges researched by the faculty member, if we institute this major, we will be in the same league with colleges a, b, and c. That has no meaning whatsoever to our model, unless we can relate it back to the community, and we don't have difficulty about those things that are carnal and not requiring intellectual rigor when we take as much pride in the fact that a graduate of WTI with an associate degree starts out in employment at $9,100 a year and average income of a public school system teacher with a baccalaureate degree is closer to $7,100 a year.

We just look at it in that context, but it's not extremely difficult to track your graduates. We have advisory committees for every curriculum offered that meet at least three times a year. Also, we are honest enough to bare our souls by stating to the advisory committee at the beginning of the academic year what our plans are for the year, and have them serve as a market place to find out where people are going to be needed and with what kind of competencies. Using persons from the employment environment, the society, we try to maintain an ongoing relationship between what the needs are as well as find out what and how well the graduated student is doing on the job, what should he or she have known that is not now reflected in the curriculum in order to have a basis for refining the curriculum.

Courses are described in terms of what the student will do and not in terms of what the faculty will do. To read WTI's catalogue, it states very clearly that a student in descriptive geometry shall do a, b, c, and d.

MR. McCLUR: Do you believe that there is some unique set of resources or circumstances to which you would attribute the enormous growth of WTI and the present prestige?

DR. DENNARD: No, I don't think there would be anything unique, other than having had the opportunity to start from scratch and not having had to live with the level of tradition that normally structures the behavior of an institution. Maybe if there is anything unique, it might be the fact that we have tried to say that based on our understanding of Carlyle's notion that institutions have no self-correcting capabilities, we know that only men reform institutions. We have been fortunate in getting the services of an exceptional group of professionals who

enjoy thinking and behaving. We try to ask ourselves if, given an opportunity to create our own, what would be the behavior of the institution, not what should be the behavior of the student exclusively, but what should be the behavior of the institution.

Also, if the institution has objectives for the academic year, and not in perpetuity, just for the academic year, how can we determine whether or not it has ambulated or locomoted or moved in any way in order to be responsive to the students that it seeks to serve. Perhaps, to address the question of institutional behavior might be the only significantly different approach to an institution that might not be commonplace elsewhere.

I have always tried not to reform, but to develop, and I don't think there is a pat answer until one first goes in and analyzes what is. My experience has been that there is a reluctance on the part of individuals to evaluate programs, but instead try to appraise people. And I think that as important as the human specie is, that the specie has to be intellectually excited toward program goals and then the energy has to be mobilized to accomplish them.

The educational environment is an historically informal decision-making one and I am discussing here the application of a formal system. One of the ways to avoid undue confrontation is to structure a formal system, in which individuals may function, without depriving them of opportunities to improve on the system or to design and substitute a new one, but not to operate incommunicado as a part of an informal arrangement that no one can identify.

The toughest job, I think, is to define the institution, and very few people will do that. It is this great institution where Dr. X, Y, and Z, taught between 1915 and 1927 and all of his books are still there and it is the root and the wellspring out of which has come all of the great graduates of which there are three who are known!

But for all of the other people, what to do for the 261 days, no one will address it.

The fact that you do not know in seeing terms what the institution is, is in itself disturbing. The Institute operates in five European countries

and one African country, in addition to having four different locations in the city, which the president rarely gets to see visually, but that does not mean that it can't be done. Again, it gets back to a theoretical model. Algebra is still the best language for dealing with relationships that you can find, and in management, if you have no arithmetic mentality, you can't develop an algorithm to see. Once you see with your mind's eye, and can share what you see, then the human being is free to become creative, so that structure does not obviate intellectual creativity, it just flushes out where it does not exist, and I just think it's possible to excite people to want to learn, to show them how to learn and to evidence it in such a way that they know.

The fact is that the same thing we evaluate, trying to make everybody get on the dean's list, the very skills that are required to get on the dean's list are the skills that we're talking about; but not because they are the basis for pledging a fraternity or staying on the athletic eligibility list, but for the purposes of managing an educational enterprise.

MR. MITCHELL: I'd like to know whether you can give me a look at what your organizational scheme looks like.

DR. DENNARD: We go back to our program structure. The elements that I identified are program structures. We have to see the program structure which includes four vice presidents, academic affairs, student affairs, research and development, and resources management; the management of the resources is the historic notion of the vice president for fiscal affairs.

Within research and development falls the function of analytic studies. We don't have institutional research per se, and we do not have conventional analytic studies, rather we attempt a form of operations research.

Instruction, public service and a portion of R&D falls into academic administration. We have intentionally retained a division between research within the faculty and research with the division of research. That basically is the way our organizational structure looks.

We have a staff of 684 persons full-time and approximately 413 part-time. This is really our sixth year of operation.

MR. WELCH: Any other questions.

A VOICE: How is the president's office organized to manage this organization?

DR. DENNARD: It's probably the most disorganized unit in the environment! The president's office has an executive assistant slot that has been filled five times in six years! It has an administrative director who in my judgment is just a fantastic tracker. She looks at everything that is to take place and develops the agenda for the meetings, and I say that the executive assistant to the president, who has never been an educator, has always been a manager who thinks in terms of the four divisions as they relate to the program functions. That office appropriately keeps the executive council which is made up of heads of most of the areas and which receives recommendations from the academic affairs council, receives recommendations from the student government to act on it. It's the executive assistant who is responsible for serving as the secretary, not only bird-dogging in between meetings, but on the occasion of the meeting.

Back to the question a little while ago, what I think might really be unique is the fact that we had the opportunity to have as chairman of our board a very young man in spirit by the name of Samuel Nabrit. Dr. Nabrit understood policy and practices and was prepared to develop policy and let the administration run the school and to keep an open environment where at least once a year all of the faculty was provided the opportunity to meet with the board, and once a year the student body meets with the board.

At both of those meetings, no administrator is responsible for programming the meeting. You get anything off your chest you want to get off, positively or negatively, and it amazes you how people respond when there are not strings attached.

We find the challenge fun, but we work hard. We have a sense of accomplishment. Thank you very kindly. (Applause)